



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX LABORATORY  
1337 S. 46TH STREET  
BLDG. 201  
RICHMOND, CA 94804-4698

OCT 19 2001

MEMORANDUM

SUBJECT: Case R01S26, SDG 01261A  
Results for Perchlorate Analysis

FROM: *B. Bettencourt*  
Brenda Bettencourt, Director  
EPA Region 9 Laboratory (PMD-2)

TO: Kevin Mayer, Remedial Project Manager  
Northern California Cleanup Section (SFD-7-2)

Attached are the report narrative and results spreadsheet from analysis of samples from the Colorado River Perchlorate Study. These data have been reviewed in accordance with EPA Region 9 Laboratory policy. Summary information for the data included in this report is as follows:

SITE/PROJECT:	Colorado River Perchlorate Study
CASE:	R01S26
LABORATORY:	U. S. EPA Region 9 Laboratory
SAMPLE DELIVERY GROUP(s):	01261A
ANALYSIS:	Perchlorate (EPA method 314.0)

A full documentation package for these data, including raw data and sample custody documentation, has been prepared and is filed at the Region 9 Laboratory. Please contact Vance Fong of the Quality Assurance Program (PMD-3) to request further review and/or validation of the data.

If you have any questions please contact Rich Bauer at (510) 412-2312, or Ken Hendrix at (510) 412-2321.

ATTACHMENT: Analytical Report

**USEPA REGION 9 LABORATORY**  
**REPORT NARRATIVE**

<b>CASE NUMBER:</b>	<b>R01S26</b>
<b>SAMPLE DELIVERY GROUP:</b>	<b>01261A</b>
<b>PROGRAM:</b>	<b>SUPERFUND</b>
<b>DOCUMENT CONTROL #:</b>	<b>B0101011-0637</b>
<b>DATE:</b>	<b>10/02/01</b>
<b>ANALYSIS:</b>	<b>Perchlorate</b>
<b>SAMPLE NUMBERS:</b>	

**SAMPLE ID**

**LABORATORY SAMPLE ID**

09421500	AB32389
09419700	AB32390
09419800	AB32391
09415000	AB32392

**GENERAL COMMENTS**

Four water samples were received from the Colorado River Perchlorate Study Superfund project on 09/18/01.

The requested analysis was perchlorate by Region 9 Laboratory SOP #531 (EPA Method 314.0). The samples were analyzed within the suggested 28-day holding time.

**SAMPLE RECEIPT AND PRESERVATION**

Samples were received with no custody seals on box and at a temperature of 19°C, which is outside the 2-6°C temperature requirements. It is believed this discrepancy will not have a significant effect on the perchlorate results.

**QC COMMENTS**

No analyte was detected in the LRB associated with this SDG.

The perchlorate result for QC sample AB32290 was greater than 4x the added LFM of 5 ug/L. No LFM and LFM duplicate recoveries were calculated for the 5 ug/L perchlorate spike. All other LFM and LFM duplicate recoveries were within the 70-130% QC limits.

The RPD between the LFM and LFM duplicate for perchlorate was less than the 20% QC limits.

The LFB recovery was within the 90-110% QC limits.

Questions concerning the data can be answered by Osell Salvador at (510) 412-2358.

## **GLOSSARY**

### **Laboratory Reagent Blanks (LRB)**

A laboratory reagent blank is laboratory reagent water or baked sand with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. The laboratory reagent blank is used to determine the level of contamination introduced by the laboratory during analysis.

### **Laboratory Fortified Matrix (LFM), Laboratory Fortified Matrix Duplicate (LFMD) and Laboratory Duplicate (LD) Analysis**

The laboratory fortified matrix spike sample and laboratory duplicate analyses provide information about the effect of the sample matrix on sample preparation and measurement. Poor percent recovery (%R) results and large relative percent difference (RPD) between duplicates may indicate inconsistent laboratory technique, sample nonhomogeneity in soils, or matrix effects which may interfere with analysis.

### **Laboratory Fortified Blank (LFB) Analysis**

The laboratory fortified blank is laboratory reagent water or baked sand with a known concentration of the analytes of interest added by the laboratory with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. Poor percent recovery (%R) results may indicate inconsistent laboratory technique.

**EPA REGION 9 LABORATORY-RICHMOND, CA**  
**SUMMARY OF ANALYTICAL RESULTS**

**Case Number:** R01S26  
**Site:** Colorado River Study  
**SDG:** 01261A  
**Date:** 10/02/01

**Analysis:** Perchlorate  
**Matrix:** Water

<b>Sample No.</b>	09421500			09419700			09419800			09415000			<b>Reagent</b>			<b>Filtered</b>		
<b>Sample I.D.</b>	Colorado River Blw Hoover Dam			Las Vegas Wash Nr Henderson			Las Vegas Wash Nr Boulder City			Virgin River @ Littlefield,AZ			<b>Blank</b>			<b>Reagent Blank</b>		
<b>Lab Sample I.D.</b>	AB32389			AB32390			AB32391			AB32392			N/A			N/A		
<b>Date of Collection</b>	08/30/01			08/28/01			08/27/01			08/29/01			N/A			N/A		
<b>Units</b>	ug/L			ug/L			ug/L			ug/L			ug/L			ug/L		
<b>Analyte</b>	<b>Result</b>	<b>Q</b>	<b>Com</b>	<b>Result</b>	<b>Q</b>	<b>Com</b>	<b>Result</b>	<b>Q</b>	<b>Com</b>	<b>Result</b>	<b>Q</b>	<b>Com</b>	<b>Result</b>	<b>Q</b>	<b>Com</b>	<b>Result</b>	<b>Q</b>	<b>Com</b>
Perchlorate	5			58			450			5	U		5	U		5	U	

Com - Comments refer to the corresponding section in the report narrative for each letter.

N/R - Not Required.

Q - Refer to data qualifiers.

U - The parameter was analyzed for, but was not detected; The associated value is the sample quantitation limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.

<b>Sample No.</b>	<b>Quantitation</b>
<b>Sample I.D.</b>	<i>Limit</i>
<b>Lab Sample I.D.</b>	N/A
<b>Date of Collection</b>	N/A
<b>Units</b>	ug/L
<b>Analyte</b>	<b>Result</b>
Perchlorate	5

Com - Comments refer to the corresponding section in the report narrative for each letter.

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